

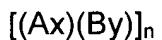
**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-5 (Cancelled).

26. (New) A soluble copolymer made of units of vinyl monomers, said soluble copolymer having the formula:



wherein:

A is a vinyl monomer comprising single unsaturation;

B is a vinyl monomer comprising multiple unsaturation; and

x, y and n are each an integer having a value greater than 0.

27. (New) The soluble copolymer of Claim 26, wherein the vinyl monomer comprising single unsaturation is selected from the group consisting of acrylic acid, butyl acrylate, ethyl acrylate, methyl methacrylate, methacrylic acid, acrylonitrile, vinyl acetate, glycidyl methacrylate, 2-hydroxyethyl methacrylate, 2-hydroxyl propyl methacrylate, 2-amino ethyl acrylate hydrochloride, butyl acrylate, cetyl acrylate, cetyl methacrylate, phenol methacrylate, N-isopropyl acrylamide, acrylamide, N-t-butyl acrylamide, styrene and styrene sulfonic acid.

28. (New) The soluble copolymer of claim 26, wherein the vinyl monomer comprising multiple unsaturation is selected from the group consisting of ethylene glycol dimethacrylate, trimethylol propane trimethacrylate, pentaerythritol trimethacrylate, pentaerythritol tetramethacrylate, bisphenol A dimethacrylate, glycerol dimethacrylate, glycerol diacrylate, vinyl methacrylate, vinyl acrylate, trimethylol propane triacrylate, pentaerythritol tetraacrylate, and an aromatic divinyl compound.

29. (New) The soluble copolymer of Claim 26, wherein the vinyl monomer comprising multiple unsaturation is ethylene glycol dimethacrylate.

30. (New) The soluble copolymer of Claim 26, wherein the content of the monomer B with multiple unsaturation in the copolymer is from 0.01-99.9%.

31. (New) The soluble copolymer of Claim 26, which is poly(methyl methacrylate-ethylene glycol methacrylate).

32. (New) The soluble copolymer of Claim 26, which is poly(methyl methacrylate-vinyl methacrylate).

33. (New) The soluble copolymer of Claim 26, which is poly(vinyl acetate-ethylene glycol methacrylate).

34. (New) The soluble copolymer of Claim 26, which is poly(methyl methacrylate-trimethylol propane trimethacrylate).

35. (New) The soluble copolymer of Claim 26, which is poly(methyl methacrylate-vinyl pyridine ethylene glycol dimethacrylate).

36. (New) The soluble copolymer of Claim 26, which is polyacrylic acid-ethylene glycol dimethacrylate).

37. (New) The soluble copolymer of Claim 26, which is poly (acrylonitrile-ethylene glycol dimethacrylate).

38. (New) The soluble copolymer of Claim 26, which is poly (N-isopropyl acrylamide-ethylene glycol dimethacrylate).

39. (New) The soluble copolymer of Claim 26, which is poly(hydroxyethyl methacrylate-ethylene glycol dimethacrylate).

40. (New) The soluble copolymer of Claim 26, which is poly(cetyl acrylate-ethylene glycol dimethacrylate).

41. (New) The soluble copolymer of Claim 26, which is poly (styrene-divinyl benzene).

42. (New) The soluble copolymer of Claim 26, which is in a form of a film or membrane.

43. (New) The soluble copolymer of Claim 26, which is in a form of microparticles.

44. (New) The soluble copolymer of Claim 26, which is in a form of nanoparticles.

45. (New) The soluble copolymer of Claim 26, which is crosslinkable by U.V. irradiation.